Refine Search

Search Results -

Terms	Documents
catalog$ and database and order$ and level$	11

Database:

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

L13

[Refine Search]

[Recall Text] [Clear] [Interrupt]

Search History

DATE: Monday, June 28, 2004   Printable Copy   Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR		
L13	catalog$ and database and order$ and level$	11	L13
	DB=EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=OR		
L12	catalog$ and satabase and order$ and level$	0	L12
	DB=EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR		
L11	catalog$ and dictionary and order$ and level$	1	L11
L10	(conform$ same (degree or level$)) and (license same (degree or level$)) and order$	0	L10
L9	(conform$ same (degree or level$)) and (license with (degree or level$)) and order$	0	L9
	DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR		
L8	(conform$ same (degree or level$)) and (license with (degree or level$)) and order$	6	L8
	DB=EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR		

L7	(conform$ with (degree or level$)) and (license with (degree or level$)) and order$	0	L7
L6	(conform$ with (degree or level$)) and (license with level$) and order$	0	L6

DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR

L5	(conform$ with (degree or level$)) and (license with level$) and order$	1	L5
L4	(conform$ same level) and (license with level) and order$	3	L4

DB=EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR

L3	(conform$ with level) and (license with level) and order$	0	L3

DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR

L2	(conform$ with level) and (license with level) and order$	1	L2
L1	6363363.pn. or 6026379.pn.	2	L1

END OF SEARCH HISTORY

☐ [Generate Collection] [Print]

L5: Entry 1 of 1   File: USPT   Mar 12, 2002

US-PAT-NO: 6356937
DOCUMENT-IDENTIFIER: US 6356937 B1

TITLE: Interoperable full-featured web-based and client-side e-mail system

DATE-ISSUED: March 12, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Montville; David	Chicago	IL	60657	
Montville; Adam	Chicago	IL	60657	

APPL-NO: 09/ 347361   [PALM]
DATE FILED: July 6, 1999

INT-CL: [07] G06 F 13/00

US-CL-ISSUED: 709/206; 709/219, 709/329
US-CL-CURRENT: 709/206; 709/219, 719/329

FIELD-OF-SEARCH: 709/201, 709/202, 709/203, 709/204, 709/205, 709/206, 709/217, 709/219, 709/223, 709/225, 709/227, 709/328, 709/329

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

[Search Selected] [Search ALL] [Clear]

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5638446	June 1997	Rubin	380/25
☐	5809242	September 1998	Shaw et al.	709/217
☐	5850442	December 1998	Muftic	
☐	5877759	March 1999	Bauer	345/339
☐	5961602	October 1999	Thompson et al.	709/229
☐	5974446	October 1999	Sonnenreich et al.	709/204
☐	6096096	August 2000	Murphy et al.	717/11
☐	6108687	August 2000	Craig	709/203

OTHER PUBLICATIONS

Screen Print of <ziplip.com>, "The ZipLip Solution", dated Jun. 2, 1999, 9 pages (numbered).
Screen Print of <hushmail.com>, "hushmail", dated May 28, 1999, 7 pages (hand numbered).
Microsoft, "Planning and Deploying Outlook Web Access", copyright 1999, 23 pages, hand numbered.

ART-UNIT: 2154

PRIMARY-EXAMINER: Vu; Viet D.

ATTY-AGENT-FIRM: Chapman and Cutler

ABSTRACT:

A full-featured e-mail system is used in both Internet-based and client-side (personal computer) forms. In each form, either basic e-mail service is provided to system subscribers or a secure, premium service with authentication, concealment, integrity, and non-repudiation functions for electronic messaging services is provided. In either form and at either level of service, subscribers can work off-line on their own computers with proprietary software loaded or, alternatively, on-line on any computer with an Internet connection. The system is interoperable, to preserve security, with all S/MIME compliant software applications, even for those users not subscribing to a service implementing the disclosed system. Digital certificates can be provided as a security service of the disclosed system, rather than requiring a second source with separate verification procedures. As additional optional features, the subscriber can control compression of outgoing attachment files, rather than having that function absent or operate in some automatic way. Decompression of such file attachments when received occurs automatically for subscribers, without having to invoke a different program or system. Interactive help features, book hierarchy uniformity for messages, accounts, certificates, virus warnings, and dual naming capability are also provided and available to subscribers in both the Web-based and the client-side application forms disclosed herein, and in both basic and premium service levels.

10 Claims, 14 Drawing figures

☐ ▨▨▨ Generate Collection ▨▨▨ | Print |

L5: Entry 1 of 1   File: USPT   Mar 12, 2002

DOCUMENT-IDENTIFIER: US 6356937 B1
TITLE: Interoperable full-featured web-based and client-side e-mail system

Detailed Description Text (16):
In order to create universal appeal, the e-mail application provides two
implementation forms and two levels of service. The first form is a Web-based
implementation that uses distributed computing technology to provide e-mail service
without downloading by the end user. The second implementation form is an
application that is loaded on or downloaded to the subscriber's personal machine
and run locally. The ability to offer the two complimentary forms for
implementation is paramount to EMC's goal of providing robust e-mail services. The
Web-based form permits subscribers who do not have their own computer, who travel,
or who otherwise use different computers to access and use these e-mail services.
The client-side application is used by subscribers who do not want to be online for
long periods for composing and reading messages. The ability of a single subscriber
to use either of these implementations alternatively, on the same account, provides
universal access to versatile e-mail services.

Detailed Description Text (17):
The Web-based form of the invention uses distributed computing technology to
provide full-featured e-mail services to an end-user subscriber from any suitable
computer that is connected to the Internet and has an Internet browser. Currently,
full-featured e-mail with privacy enhancements is available only in those e-mail
applications that are run on the end-user's local machine. The drawback of this
approach is that the user needs to be at that machine in order to use the e-mail
application, and thus have all the expected e-mail features and also secure
communications. The Web-based form of this invention provides secure communication
to or from any place the subscriber is located.

Detailed Description Text (61):
The second, and higher, class of certificate guarantees authentication of the
user's true identity via physical identification. This means that the user applying
for a level-two certificate needs to be identified with proper credentials (i.e., a
passport or driver's license) by the CA or a licensed signatory. A particularly
easy method of achieving this goal would be to have the user download and print a
legally binding document (the document can contain a digital watermark to protect
the integrity of the document) that the user can sign in the presence of a notary
public or other official. The document is then physically sent (by courier or mail)
to the issuing CA for confirmation. The approved applicant would receive the issued
certificate in one of two ways. The certificate would either be distributed via
password authenticated secure Web download, or it could be sent via certified mail
or by some other trusted courier.

Detailed Description Text (79):
KCGS: this is the most critical server. This server must conform to level four
security levels as specified in FIPS PUB 140-1. Furthermore, each of the two
required machines should contain dual processors and be quad processor capable.
There are periods when these machines are required to generate much mathematical

data in short amounts of time; thus the processor speed is of the utmost importance. Storage space, however, is not a large concern. Sufficient storage is necessary to store any cryptographic files that are necessary for generating digital certificates.

Detailed Description Text (96):
Each implementation requires different handling of functionality in order to emulate these features; however, the differences between the overall look and feel of each implementation should go largely unnoticed by the subscriber. The e-mail application is designed to implement S/MIME messaging utilizing X.509 certificates.

Detailed Description Text (117):
This application is designed with two general environments in mind. The first environment is that of an Internet browser, such as Netscape Navigator. In this sense, the application is to run through the browser in order to get to the user. The modular design of the application provides for simple transition between Web-based application usage and the second environment.

Detailed Description Text (149):
3.5 Order Messages in Particular Folder

Detailed Description Text (207):
The user can select the options that he/she prefers. If a user doesn't wish to use the Interactive Help Panel, that option can be disabled by checking the checkbox "Interactive Help Panel Settings" heading. In order to restore the Interactive Help Panel to the default functionality, the user would click the "Reset Interactive Help Panel" button. The user also has the availability to enable/disable encryption, digital signatures, attachment compression, signature file appending, and outgoing message options. When the user is finished selecting and/or deselecting the available options, he/she may exit the preferences display by selecting the "Exit Preferences" button. When this button is pressed, the application moves to the prior state of the application. That is, if the user was in a different state, such as composition, that state would return to the display, assuming the exact information that was there when the user entered the preferences state. It is important to note that the selection of certain options from the preferences display does not affect the previous state of the application. Thus, if the user was composing a message before entering the preferences state, and then changed the encryption settings, these changes would be noticed, not on the current composition, but on the next composition.

Detailed Description Text (212):
The user adds a message filter by entering a filter name, the constraint field of the filter, what the field should contain in order to be filtered, and a folder in which to place the messages meeting the requirements of the filter. The constraint fields are those fields found in the header of an e-mail message, such as "to", "from", and "cc". The user can select any number of containments for the field, the most common being either part or all of an e-mail address. The pull down menu lists the current folders in the Message Book, and contains a selection that allows the user to create a new folder from within this display. This display cannot be entered if the application is currently running a critical function.

Detailed Description Text (228):
The Attach File button, when clicked (on the tool bar in the frame), brings up a dialog box (the only separate window used by the application) in order to allow the user to select a file that he/she wishes to attach. The file can be of any type and size, if the user has the proper permissions to access and download the file. The dialog box that this option displays is a familiar Windows file dialog box. It supplies a directory tree, a name field, a pull down menu of available disk drives, etc. When a file is attached, it is placed into a buffer and waits for the send or

"Save as Draft" button to be selected for proper handling. When the user has completed selection of the desired attachment, the file dialog exits and the user may continue editing the composition. This option is not operational if the application is currently running a critical process.

Detailed Description Text (233):
When the user selects the "Retrieve Messages" button from the second line of the tool bar (FIGS. 5-14, second line of tool bar), the application gets messages from the user's various e-mail accounts. The first account to be checked is the account found on the EMC server. If the user has other accounts listed in his or her e-mail account book, these will be checked in the order in which the user entered them. Note that only default accounts will be checked automatically. Any other accounts must be checked for messages manually. For each account that is checked, the message filter will be invoked. The state of the application remains the same except for the second window, which changes to display the message book.

Hit List

Search Results - Record(s) 1 through 6 of 6 returned.

☐   1.   Document ID: US 6697944 B1

Using default format because multiple data bases are involved.

```
L8: Entry 1 of 6                           File: USPT                    Feb 24, 2004

US-PAT-NO: 6697944
DOCUMENT-IDENTIFIER: US 6697944 B1

TITLE: Digital content distribution, transmission and protection system and method,
and portable device for use therewith

DATE-ISSUED: February 24, 2004

INVENTOR-INFORMATION:
NAME                             CITY       STATE    ZIP CODE      COUNTRY
Jones; Thomas C.                 Redmond    WA
Brackenridge; Billy              Seattle    WA

US-CL-CURRENT: 713/168; 705/1, 705/50, 705/56, 705/57, 713/2
```

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

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☐   2.   Document ID: US 6640145 B2

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L8: Entry 2 of 6                    File: USPT                       Oct 28, 2003

US-PAT-NO: 6640145
DOCUMENT-IDENTIFIER: US 6640145 B2

TITLE: Media recording device with packet data interface
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Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

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☐   3.   Document ID: US 6400996 B1

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L8: Entry 3 of 6                    File: USPT                       Jun 4, 2002

US-PAT-NO: 6400996
DOCUMENT-IDENTIFIER: US 6400996 B1
```

TITLE: Adaptive pattern recognition based control system and method

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

☐ 4.   Document ID: US 6356937 B1

L8: Entry 4 of 6   File: USPT   Mar 12, 2002

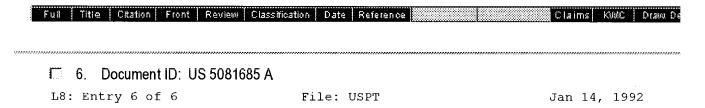US-PAT-NO: 6356937
DOCUMENT-IDENTIFIER: US 6356937 B1

TITLE: Interoperable full-featured web-based and client-side e-mail system

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

☐ 5.   Document ID: US 6253588 B1

L8: Entry 5 of 6   File: USPT   Jul 3, 2001
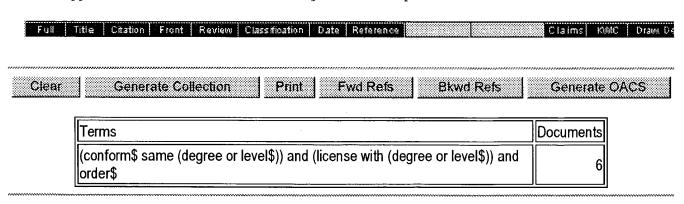
US-PAT-NO: 6253588   .
DOCUMENT-IDENTIFIER: US 6253588 B1

TITLE: Quick plastic forming of aluminum alloy sheet metal

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

☐ 6.   Document ID: US 5081685 A

L8: Entry 6 of 6   File: USPT   Jan 14, 1992

US-PAT-NO: 5081685
DOCUMENT-IDENTIFIER: US 5081685 A

TITLE: Apparatus and method for reading a license plate

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

| Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS |

Terms	Documents
(conform$ same (degree or level$)) and (license with (degree or level$)) and order$	6

Display Format: |-   Change Format

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs
Generate OACS

Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1.   Document ID: NN8901252

Using default format because multiple data bases are involved.

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L11: Entry 1 of 1                    File: TDBD                    Jan 1, 1989
```

TDB-ACC-NO: NN8901252

DISCLOSURE TITLE: Paging of Display Screen Images Using Footswitch and Digital
Interface

PUBLICATION-DATA:
IBM Technical Disclosure Bulletin, January 1989, US

VOLUME NUMBER: 31
ISSUE NUMBER: 8
PAGE NUMBER: 252 - 254

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
catalog$ and dictionary and order$ and level$	1

Display Format: |-   Change Format

Previous Page   Next Page   Go to Doc#

Hit List

Search Results - Record(s) 1 through 10 of 11 returned.

☐ 1. Document ID: NNRD445184

Using default format because multiple data bases are involved.

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    L13: Entry 1 of 11                    File: TDBD                May 1, 2001
```

TDB-ACC-NO: NNRD445184

DISCLOSURE TITLE: DON and Level field agents for RMS Resource Documents

PUBLICATION-DATA:
IBM technical Disclosure Bulletin, May 2001, UK

ISSUE NUMBER: 445
PAGE NUMBER: 888

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | | Claims | KWIC | Draw De |

☐ 2. Document ID: NNRD439138

```
    L13: Entry 2 of 11                    File: TDBD                Nov 1, 2000
```

TDB-ACC-NO: NNRD439138

DISCLOSURE TITLE: A Structured Methodology for Creating Product Information
Taxonomies

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | | Claims | KWIC | Draw De |

3. Document ID: NNRD431191

L13: Entry 3 of 11   File: TDBD   Mar 1, 2000

TDB-ACC-NO: NNRD431191

DISCLOSURE TITLE: Multi-search of video segments indexed by time-aligned annotations of video content

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| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

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4. Document ID: NA920980

L13: Entry 4 of 11   File: TDBD   Sep 1, 1992

TDB-ACC-NO: NA920980

DISCLOSURE TITLE: Support of Column Privileges in SQL.

SECURITY: Use, copying and distribution of this data is subject to the restictions in the Agreement For IBM TDB Database and Related Computer Databases. Unpublished - all rights reserved under the Copyright Laws of the United States. Contains confidential commercial information of IBM exempt from FOIA disclosure per 5 U.S.C. 552(b)(4) and protected under the Trade Secrets Act, 18 U.S.C. 1905.

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| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

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5. Document ID: NN910869

L13: Entry 5 of 11   File: TDBD   Aug 1, 1991

TDB-ACC-NO: NN910869

DISCLOSURE TITLE: Recovery of Data Pages After Partial Page Writes.

SECURITY: Use, copying and distribution of this data is subject to the restictions in the Agreement For IBM TDB Database and Related Computer Databases. Unpublished - all rights reserved under the Copyright Laws of the United States. Contains confidential commercial information of IBM exempt from FOIA disclosure per 5 U.S.C. 552(b)(4) and protected under the Trade Secrets Act, 18 U.S.C. 1905.

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| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

6. Document ID: NN9101183

L13: Entry 6 of 11   File: TDBD   Jan 1, 1991

TDB-ACC-NO: NN9101183

DISCLOSURE TITLE: Process-Driven Logon And Logoff As Opposed to User-Driven.

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

7. Document ID: NA8911466

L13: Entry 7 of 11   File: TDBD   Nov 1, 1989

TDB-ACC-NO: NA8911466

DISCLOSURE TITLE: Automated Problem Reporting

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

8. Document ID: WO 2003016546 A1

L13: Entry 8 of 11   File: DWPI   Feb 27, 2003

DERWENT-ACC-NO: 2003-268337
DERWENT-WEEK: 200326
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TITLE: Amplifying genetic material for detecting the presence of pathogens in a sample and in recording and cataloging unidentified organisms, by amplifying genetic material using single primer sequence

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

☐ 9.   Document ID: WO 200104852 A1, AU 200059217 A

L13: Entry 9 of 11   File: DWPI   Jan 18, 2001

DERWENT-ACC-NO: 2001-147226
DERWENT-WEEK: 200127
COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: Purchase total calculation for calculating discounted prices for products
sold at retail, involves determining if calculated initial purchase total is equal
to preset threshold, to calculate reduced purchase total

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

☐ 10.   Document ID: WO 200023929 A1, AU 9964336 A, EP 1040440 A1

L13: Entry 10 of 11   File: DWPI   Apr 27, 2000

DERWENT-ACC-NO: 2000-364951
DERWENT-WEEK: 200031
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TITLE: Internet based electronic commerce business transaction processor, performs
billing for retail customer for ordered product authorized for shipment

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

| Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS |

Terms	Documents
catalog$ and database and order$ and level$	11

Display Format: |- | Change Format

<u>First Hit</u>

☐ ▓▓▓▓ Generate Collection ▓▓▓▓ | Print |

L13: Entry 8 of 11   File: DWPI   Feb 27, 2003

DERWENT-ACC-NO: 2003-268337
DERWENT-WEEK: 200326
COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: Amplifying genetic material for detecting the presence of pathogens in a
sample and in recording and <u>cataloging</u> unidentified organisms, by amplifying
genetic material using single primer sequence

INVENTOR: BURGOYNE, L A

PATENT-ASSIGNEE: FLINDERS TECHNOLOGIES PTY LTD (FLINN), KOHN K I (KOHNI)

PRIORITY-DATA: 2001US-313912P (August 21, 2001)

▓▓▓▓ Search Selected ▓▓▓▓ | ▓▓▓ Search ALL ▓▓▓ | ▓▓ Clear ▓▓ |

PATENT-FAMILY:

	PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
☐	WO 2003016546 A1	February 27, 2003	E	046	C12P019/34

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE
DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN
TR TT TZ UA UG US UZ VN YU ZA ZM ZW AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM
GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
WO2003016546A1	August 21, 2002	2002WO-US26670	

INT-CL (IPC): <u>C07</u> <u>H</u> <u>21</u>/<u>04</u>; <u>C12</u> <u>P</u> <u>19</u>/<u>34</u>; <u>C12</u> <u>Q</u> <u>1</u>/<u>68</u>

ABSTRACTED-PUB-NO: WO2003016546A
BASIC-ABSTRACT:

NOVELTY - Amplifying (M) genetic material, comprising amplifying the genetic
material using a single primer sequence, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a detector for detecting pathogens in a sample, comprises a single primer
sequence for use in an amplification reaction, where the primer sequence amplifies
pathogen genetic material, thus detecting pathogens in a sample;

(2) a kit for performing (M), comprises a single primer sequence, and a device for

amplifying genetic material;

(3) a device for performing (M), comprises a robot for performing (M), and DNA separating and observing units functionally connected to the robot, therefore the robot runs the DNA separating and observing units; and

(4) a computer program for creating primers for use in (M).

USE - (M) is useful for detecting the presence of pathogens in a sample, by amplifying genetic material for a pathogen in the sample using a single primer in an amplification process. (M) is useful in recording and cataloging unidentified organisms (claimed).

(M) is useful for amplifying RNA and/or DNA in a sample while simultaneously producing molecular clones that also constitute a profile of that sample, for detecting illness and the presence of bacteria or other pathogens, for agricultural purposes such as testing for bacteria in soil samples or other similar purposes, for detecting infectious bacterial and viral diseases, for biologically profiling soils from minute samples of soil, to amplify nucleic acid from any parasite in the plasma or serum, to detect known or unknown virions, either RNA or DNA, with equal speed and ease, to detect bacteria, and in systems that handle the acquisition and analysis of complex data in databases that associate clinical records with molecular data.

(M) is useful in conjunction with a material that can store genetic material e.g., processing for RNA occurring on the storage media, low specificity, high-gain amplification using very few primers and, in the preferred and demonstrate version, long-range PCR, for optimizing the degree of specificity for general use from the choice of amplification conditions, generalized to the choice of the contours of an amplification-conditions ramp, and final data analysis by nucleic acid arrays or on-line sequencing technology. (M) is useful in open-ended accumulation of sequence libraries for use on chip-style devices, for measuring and detecting trace levels of nucleic acid, to objectively record and catalogue large numbers of previously unidentified organisms as gel patterns for future reference, for typing complex mixtures of organisms, in microbial profiling, in forensics, and in quality control, especially in commercial DNA polymerase preparations.

ADVANTAGE - (M) has extreme resistance towards the formation of primer-dimers and primer concatenates, and does not require use of a ligase nor does it require significant sequence specificity from the primers. In (M), single primers are used instead of arrays of single primers as are required by the conventional methods. The use of single primers causes the species being amplified to have complementary termini. These termini normally interfere with amplification in both a size-dependent way such that large inserts are favored and in an interprimer sequence-dependent way such that sequences that fold to keep the ends apart are favored. (M) does not require large amounts of nucleic acid, as are usually required by two-primer amplifications, in order for amplification to take place, and is highly selective in the amplification of sequences. (M) preferentially amplifies sample sequences from more complex genomes than from very simple genomes because the more complex a genome, the higher the probability of unusually amplifiable interprimer sequences that are contained in it. The method stops the selectivity of the PCR from being dominated by the homology of the primers to the template and instead makes selectivity dependent on the properties of the amplified section between the primers. (M) measure levels of nucleic acids more sensitively than current technology, without respect to a specific organism.

ABSTRACTED-PUB-NO: WO2003016546A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.0/6

DERWENT-CLASS: B04 D16 T01
CPI-CODES: B04-E01; B04-E05; B04-F10; B04-F11; B11-C07B3; B11-C08A; B11-C08D1; B11-C08E5; B12-K04A4; B12-K04E; D05-H04; D05-H06A; D05-H09; D05-H12D1; D05-H18B;
EPI-CODES: T01-J06; T01-S03;

First Hit

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┌      ░░░░░░░Generate Collection░░░░░░░     Print
└
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L13: Entry 9 of 11   File: DWPI   Jan 18, 2001

DERWENT-ACC-NO: 2001-147226
DERWENT-WEEK: 200127
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TITLE: Purchase total calculation for calculating discounted prices for products
sold at retail, involves determining if calculated initial purchase total is equal
to preset threshold, to calculate reduced purchase total

INVENTOR: MIK, M; TEDESCO, D E ; VAN LUCHENE, A S ; WALKER, J S

PATENT-ASSIGNEE: WALKER DIGITAL LLC (WALKN)

PRIORITY-DATA: 1999US-0350875 (July 9, 1999)

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        ░░░░Search Selected░░░░    ░░Search ALL░░    ░░Clear░░
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PATENT-FAMILY:

	PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
☐	WO 200104852 A1	January 18, 2001	E	097	G07G001/14
☐	AU 200059217 A	January 30, 2001		000	G07G001/14

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK
DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU
LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG
US UZ VN YU ZA ZW AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TZ UG ZW

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
WO 200104852A1	July 7, 2000	2000WO-US18638	
AU 200059217A	July 7, 2000	2000AU-0059217	
AU 200059217A		WO 200104852	Based on

INT-CL (IPC): G06 F 17/60; G07 G 1/14

ABSTRACTED-PUB-NO: WO 200104852A
BASIC-ABSTRACT:

NOVELTY - The method involves determining whether the initial purchase total for a
transaction is equal to a preset threshold value. If so, a reduced purchase total
for the transaction is calculated based on respective second prices for each of the
products to be purchased. The second price is calculated based on the first price,
cost associated with corresponding product, and minimum profit amount.

DETAILED DESCRIPTION - The method involves receiving a number of product identifiers each representing a respective product to be purchased. An initial purchase total for the transaction is calculated based on the first prices for each of the products to the purchased. If the initial purchase total is at least equal to a predetermined threshold purchase total, a reduced purchase total is calculated based on respective second prices for the products. At least one of the respective second prices is lower than corresponding first price for the product. The first and second prices are retrieved from a database. INDEPENDENT CLAIMS are also included for the following:

(a) Point-of-sale terminal controlling method;

(b) Shopping website operating method;

(c) Web server computer;

(d) Operating method of catalog order

(e) Purchase total calculation apparatus;

(f) Data storage device;

(g) Purchase total calculation program;

(h) Data processing apparatus;

(i) Data accessing method

USE - To calculate discounted prices for products sold at retail in supermarkets, drug stores, quick service restaurants, retail stores.

ADVANTAGE - Permits the seller to predetermine and store one or more levels of discount prices on a product-by-product basis. Thereby preserves satisfactory profit margins. The retailer is permitted to use a flexible discounting plan to promote sales of certain products, such as store brand products, perishable products, or high margin products.

DESCRIPTION OF DRAWING(S) - The figure shows a portion of the database and an illustrative display that indicates the various conditions of a condition database.

ABSTRACTED-PUB-NO: WO 200104852A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.7/26

DERWENT-CLASS: T01 T05
EPI-CODES: T01-H07C5; T01-J05A1; T01-J05B4P; T01-J11C1; T05-L01A;

<u>First Hit</u>

☐ ▓▓▓ Generate Collection ▓▓▓ | Print

L13: Entry 10 of 11   File: DWPI   Apr 27, 2000

DERWENT-ACC-NO: 2000-364951
DERWENT-WEEK: 200031
COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: Internet based electronic commerce business transaction processor, performs billing for retail customer for <u>ordered</u> product authorized for shipment

INVENTOR: ALVIN, R S

PATENT-ASSIGNEE: HARDWARESTREET.COM INC (HARDN)

PRIORITY-DATA: 1999US-0343547 (June 30, 1999), 1998US-104829P (October 19, 1998)

▓▓▓ Search Selected ▓▓▓ | ▓▓▓ Search ALL ▓▓▓ | ▓▓▓ Clear ▓▓▓

PATENT-FAMILY:

	PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
☐	<u>WO 200023929 A1</u>	April 27, 2000	E	041	G06F017/60
☐	<u>AU 9964336 A</u>	May 8, 2000		000	G06F017/60
☐	<u>EP 1040440 A1</u>	October 4, 2000	E	000	G06F017/60

DESIGNATED-STATES: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
WO 200023929A1	October 19, 1999	1999WO-US24453	
AU 9964336A	October 19, 1999	1999AU-0064336	
AU 9964336A		WO 200023929	Based on
EP 1040440A1	October 19, 1999	1999EP-0952033	
EP 1040440A1	October 19, 1999	1999WO-US24453	
EP 1040440A1		WO 200023929	Based on

INT-CL (IPC): <u>G06</u> <u>F</u> <u>17</u>/<u>60</u>

ABSTRACTED-PUB-NO: WO 200023929A
BASIC-ABSTRACT:

NOVELTY - A distribution selection processor dynamically allocates a particular <u>order</u> to one of distributor's handing a particular product involved in purchase

order, based on specific selection criteria, and also authorizes selected distributor to ship ordered product to retail customer. A payment processor (40) performs billing for retail customer for ordered product authorized for shipment.

DETAILED DESCRIPTION - Catalog-type product data for selected products, are stored in a database (70). A communication interface selectively permits one of retail customers to selectively access the product data stored in the database. An electronic order form is provided for retail customer to place a purchase order of the selected product. The order processor processes the placed purchase orders. The distribution selection processor dynamically allocating a particular product to distributors, has a comparator which compares like types of product data for distributors handling-like product, to determine an optimum distributor selection based on selection criteria including product price, availability, shipping date, shipping location or discount data. An INDEPENDENT CLAIM is also included for Internet based electronic commerce business transaction processing method.

USE - For processing electronic commerce business transactions e.g. for computer related products, etc in Internet.

ADVANTAGE - The modular design of business transaction processor allows the distribution of processing load among several parallel service, thereby enabling faster processing of transactions and providing expandability for future growth. Interacts with multiple distributors, thereby enabling larger selection of products with higher availability and aggressively competitive pricing. Utilizes multilevel fraud checking system incorporating propriety as well as commercially available fraud checking system, thereby enabling high level of risk management. The business transaction processor is fully automated, including automatic generation of electronic catalog, competitive pricing engine according to flexible rule-based algorithms, and automatic feedback to the customer.

DESCRIPTION OF DRAWING(S) - The figure shows block diagram of over all Internet based e-mail business transaction processing system.

Payment processor(70) Database 40
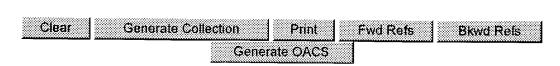
ABSTRACTED-PUB-NO: WO 200023929A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.1/6

DERWENT-CLASS: T01
EPI-CODES: T01-H07C5E; T01-J05A1; T01-J05B4P;

Hit List

Search Results - Record(s) 11 through 11 of 11 returned.

☐ 11. Document ID: WO 200023928 A2, AU 200011244 A, EP 1040441 A2

Using default format because multiple data bases are involved.

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   L13: Entry 11 of 11                    File: DWPI              Apr 27, 2000
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DERWENT-ACC-NO: 2000-364950
DERWENT-WEEK: 200031
COPYRIGHT 2004 DERWENT INFORMATION LTD
TITLE: Internet-based electronic commerce business transaction processor performs
billing for retail customer for ordered product, when selected supplier is
authorized to ship product to customer

INVENTOR: ALVIN, R S

PRIORITY-DATA: 1999US-0345383 (June 30, 1999), 1998US-104830P (October 19, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 200023928 A2	April 27, 2000	E	040	G06F017/60
AU 200011244 A	May 8, 2000		000	G06F017/60
EP 1040441 A2	October 4, 2000	E	000	G06F017/60

INT-CL (IPC): G06 F 17/60

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De |

Terms	Documents
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Display Format: |- | Change Format

Refine Search

Search Results -

Terms	Documents
L26 and (licens$ with level$)	3

Database:
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US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins
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Search:
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L28
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Search History

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L27	L23 and (licens$ with level$)	19	L27
L26	L25 and (catalog$ or dictionary)	14	L26
L25	L24 not I18	14	L25
L24	L23 and I2	14	L24
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L19	(((license or certificat$) adj2 level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @pd<=20000725	0	L19
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L17	L16 and I2	0	L17
L16	(((license or certificat$) adj2 level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	9	L16
L15	L10 and (matsushita w2 industrial)	1	L15
L14	L10 and (matsushita adj2 industrial)	1	L14
L13	L10 and (matsushita 2n industrial)	1	L13
L12	L10 and (matsushita 2a industrial)	1	L12
L11	L10 and (matsushita 2w industrial)	1	L11
L10	6334115.pn.	1	L10
L9	L2 and I6	243	L9
L8	L2 and I7	243	L8
L7	(((license or certificat$) (w2) level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	10273	L7
L6	(((license or certificat$) (2w) level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	10242	L6
L5	(((license or certificat$) (2a) level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	10642	L5
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L2	705/22,28,29,26,27.ccls.	1697	L2
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Database:
- US Pre-Grant Publication Full-Text Database
- US Patents Full-Text Database
- US OCR Full-Text Database
- EPO Abstracts Database
- JPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

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Search History

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L16	((license or certificat$) adj2 level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	9	L16
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L14	L10 and (matsushita adj2 industrial)	1	L14

L13	L10 and (matsushita 2n industrial)	1	L13
L12	L10 and (matsushita 2a industrial)	1	L12
L11	L10 and (matsushita 2w industrial)	1	L11
L10	6334115.pn.	1	L10
L9	L2 and I6	243	L9
L8	L2 and I7	243	L8
L7	((license or certificat$) (w2) level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	10273	L7
L6	((license or certificat$) (2w) level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	10242	L6
L5	((license or certificat$) (2a) level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	10642	L5
L4	L3 and (conform$ with (catalog$ or dictionar$))	2	L4
L3	L2 and I1	243	L3
L2	705/22,28,29,26,27.ccls.	1697	L2
L1	((license or certificat$) (2n) level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	10261	L1

END OF SEARCH HISTORY

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Search Results - Record(s) 1 through 9 of 9 returned.

☐ 1. Document ID: US 6496858 B1

L16: Entry 1 of 9   File: USPT   Dec 17, 2002

US-PAT-NO: 6496858
DOCUMENT-IDENTIFIER: US 6496858 B1
** See image for **Certificate of Correction** **

TITLE: Remote reconfiguration of a secure network interface

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 2. Document ID: US 6453468 B1

L16: Entry 2 of 9   File: USPT   Sep 17, 2002

US-PAT-NO: 6453468
DOCUMENT-IDENTIFIER: US 6453468 B1

TITLE: Methods for improving reliability while upgrading software programs in a clustered computer system

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 3. Document ID: US 6345288 B1

L16: Entry 3 of 9   File: USPT   Feb 5, 2002

US-PAT-NO: 6345288
DOCUMENT-IDENTIFIER: US 6345288 B1

TITLE: Computer-based communication system and method using metadata defining a control-structure

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 4. Document ID: US 6230194 B1

L16: Entry 4 of 9   File: USPT   May 8, 2001

US-PAT-NO: 6230194
DOCUMENT-IDENTIFIER: US 6230194 B1

TITLE: Upgrading a secure network interface

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De

☐ 5.   Document ID: US 6088717 A

L16: Entry 5 of 9   File: USPT   Jul 11, 2000

US-PAT-NO: 6088717
DOCUMENT-IDENTIFIER: US 6088717 A

TITLE: Computer-based communication system and method using metadata defining a
control-structure

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De

☐ 6.   Document ID: US 6073172 A

L16: Entry 6 of 9   File: USPT   Jun 6, 2000

US-PAT-NO: 6073172
DOCUMENT-IDENTIFIER: US 6073172 A

TITLE: Initializing and reconfiguring a secure network interface

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De

☐ 7.   Document ID: US 6012100 A

L16: Entry 7 of 9   File: USPT   Jan 4, 2000

US-PAT-NO: 6012100
DOCUMENT-IDENTIFIER: US 6012100 A

TITLE: System and method of configuring a remotely managed secure network interface

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De

☐ 8.   Document ID: US 5862325 A

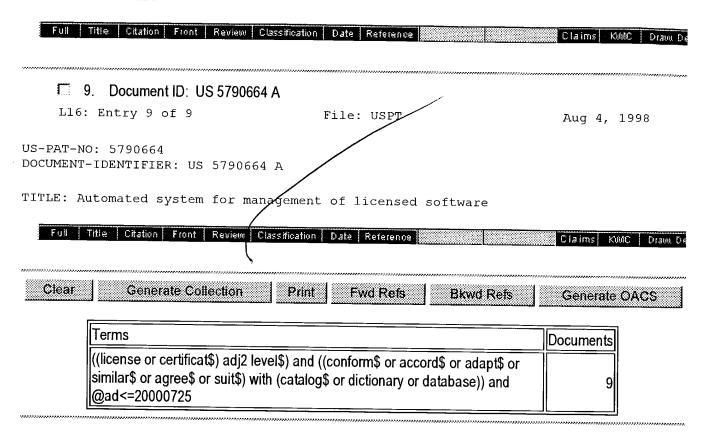L16: Entry 8 of 9   File: USPT   Jan 19, 1999

US-PAT-NO: 5862325
DOCUMENT-IDENTIFIER: US 5862325 A

TITLE: Computer-based communication system and method using metadata defining a

control structure

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | | Claims | KWIC | Draw De |

☐ 9. Document ID: US 5790664 A

L16: Entry 9 of 9   File: USPT   Aug 4, 1998

US-PAT-NO: 5790664
DOCUMENT-IDENTIFIER: US 5790664 A

TITLE: Automated system for management of licensed software

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | | Claims | KWIC | Draw De |

| Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS |

Terms	Documents
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Search Results -

Terms	Documents
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Database:

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

L26

Refine Search

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Search History

DATE: Monday, June 28, 2004   Printable Copy   Create Case

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L25	L24 not I18	14	L25
L24	L23 and I2	14	L24
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L22	((license or certificat$) adj3 level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (level or degree)) and @pd<=20000725	0	L22
L21	((license or certificat$) with level$) and (catalog$ or dictionar$) and @pd<=20000725	0	L21
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L16	((license or certificat$) adj2 level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	9	L16
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L13	L10 and (matsushita 2n industrial)	1	L13
L12	L10 and (matsushita 2a industrial)	1	L12
L11	L10 and (matsushita 2w industrial)	1	L11
L10	6334115.pn.	1	L10
L9	L2 and I6	243	L9
L8	L2 and I7	243	L8
L7	((license or certificat$) (w2) level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	10273	L7
L6	((license or certificat$) (2w) level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	10242	L6
L5	((license or certificat$) (2a) level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	10642	L5
L4	L3 and (conform$ with (catalog$ or dictionar$))	2	L4
L3	L2 and I1	243	L3
L2	705/22,28,29,26,27.ccls.	1697	L2
L1	((license or certificat$) (2n) level$) and ((conform$ or accord$ or adapt$ or similar$ or agree$ or suit$) with (catalog$ or dictionary or database)) and @ad<=20000725	10261	L1

END OF SEARCH HISTORY

☐ ▓▓▓▓▓ Generate Collection ▓▓▓▓▓ │ Print │

L26: Entry 3 of 14   File: USPT   Mar 26, 2002

DOCUMENT-IDENTIFIER: US 6363363 B1
TITLE: System, method and article of manufacture for managing transactions in a
high availability system

Application Filing Date (1):
19990824

Detailed Description Text (528):
As discussed above, the TCP/IP protocol suite is utilized at the transport level.
At the application level, in compliance with SET, all requests arrive at the
Gateway in MIME encapsulated HITP format. Similarly, all responses from the Gateway
to the merchant servers will be transferred in HTTP. The HTTP protocol stipulates
that a request-response pair will go through the same TCP connection and that the
originator, in this case a merchant server, will establish a connection to send the
request and will take down the connection when it has received the response.

Detailed Description Text (557):
The Gateway runs under the HP-UX Version 10.10 operating system and is upgraded to
support future significant system releases. HP-UX 10.10 conforms to major
standards, including: X/Open UNIX 95 (conforming with the Single UNIX
Specification, SPEC 1170) X/Open Portability Guide Issue 4 Base Profile (XPG4) OSF
AES IEEE POSIX 1003.1 and 1003.2 AT&T System V Interface Definition (SVID3 base and
kernel extensions subset) Level 1 API support UC Berkeley Software Distribution 4.3
(BSD 4.3) including such features as job control, fast file system, symbolic links,
long file names, and the C shell System V.4 File System Directory Layout

Detailed Description Text (627):
In a preferred embodiment, a holder of a payment instrument (cardholder) surfs the
web (Internet) for required items. This is typically accomplished by using a
browser to view on-line catalog information on the merchant's World Wide Web page.
However, order numbers can be selected from paper catalogs or a CD-ROM and entered
manually into the system. This method allows a cardholder to select the items to be
purchased either automatically or manually. Then, the cardholder is presented with
an order form containing the list of items, their prices, and totals. The totals
could include shipping, handling and taxes for example. The order form is delivered
electronically from the merchant's server or created on the cardholder's computer
by electronic shopping software. An alternative embodiment supports a negotiation
for goods by presenting frequent shopper identification and information about a
competitor's prices.

Detailed Description Text (691):
FIG. 35 is a flowchart of conditional authorization of payment in accordance with a
preferred embodiment. Processing commences at 3500 where the program initializes
the connection between the cardholder and the merchant for the purposes of
shopping. After the cardholder completes shopping, a new SSL connection is
established which provides authenticating information to the merchant. At this
point the merchant is able to execute payment functionality (based on SSL or SET)
conditionally, based upon the quality and character of the digital signature and
the certificate used to validate said signature. Then, at function block 3510, the

cardholder selects the payment instrument for the particular transaction. Payment instruments could include VISA, MASTERCARD, AMERICAN EXPRESS, CHECK, SMARTCARD or DEBIT CARDS. The payment method is then submitted to the merchant at function block 3520. The merchant then initializes the SET connection to the acquiring bank at function block 3530 if the connection is not already established. Then, at function block 3540, the certificate is submitted to the merchant from the acquiring bank. The certificate includes a public key portion and a private key used as an irrebutable digital signature to authenticate the parties to the transaction. The certificate also includes information on the level of credit risk which allows a merchant to conditionally decide on the authorization or rejection of credit under a particular payment instrument based on their risk level and the merchant's personal comfort level with the ability of the cardholder to pay. This processing has not previously been possible because the information returned from the authorizing bank did not include a level of credit risk a cardholder posed, it only contained credit rejected or approved.

Current US Cross Reference Classification (1):
705/26

Current US Cross Reference Classification (2):
705/27

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L26: Entry 9 of 14   File: USPT   Feb 15, 2000

DOCUMENT-IDENTIFIER: US 6026379 A
TITLE: System, method and article of manufacture for managing transactions in a high availability system

Application Filing Date (1):
19960617

Detailed Description Text (1125):
As discussed above, the TCP/IP protocol suite is utilized at the transport level. At the application level, in compliance with SET, all requests arrive at the Gateway in MIME encapsulated HTTP format. Similarly, all responses from the Gateway to the merchant servers will be transferred in HTTP. The HTTP protocol stipulates that a request-response pair will go through the same TCP connection and that the originator, in this case a merchant server, will establish a connection to send the request and will take down the connection when it has received the response.

Detailed Description Text (1270):
In a preferred embodiment, a holder of a payment instrument (cardholder) surfs the web (Internet) for required items. This is typically accomplished by using a browser to view on-line catalog information on the merchant's World Wide Web page. However, order numbers can be selected from paper catalogs or a CD-ROM and entered manually into the system. This method allows a cardholder to select the items to be purchased either automatically or manually. Then, the cardholder is presented with an order form containing the list of items, their prices, and totals. The totals could include shipping, handling and taxes for example. The order form is delivered electronically from the merchant's server or created on the cardholder's computer by electronic shopping software. An alternative embodiment supports a negotiation for goods by presenting frequent shopper identification and information about a competitor's prices.

Detailed Description Text (1339):
FIG. 35 is a flowchart of conditional authorization of payment in accordance with a preferred embodiment. Processing commences at 3500 where the program initializes the connection between the cardholder and the merchant for the purposes of shopping. After the cardholder completes shopping, a new SSL connection is established which provides authenticating information to the merchant. At this point the merchant is able to execute payment functionality (based on SSL or SET) conditionally, based upon the quality and character of the digital signature and the certificate used to validate said signature. Then, at function block 3510, the cardholder selects the payment instrument for the particular transaction. Payment instruments could include VISA, MASTERCARD, AMERICAN EXPRESS, CHECK, SMARTCARD or DEBIT CARDS. The payment method is then submitted to the merchant at function block 3520. The merchant then initializes the SET connection to the acquiring bank at function block 3530 if the connection is not already established. Then, at function block 3540, the certificate is submitted to the merchant from the acquiring bank. The certificate includes a public key portion and a private key used as an irrebutable digital signature to authenticate the parties to the transaction. The certificate also includes information on the level of credit risk which allows a merchant to conditionally decide on the authorization or rejection of credit under

a particular payment instrument based on their risk level and the merchant's personal comfort level with the ability of the cardholder to pay. This processing has not previously been possible because the information returned from the authorizing bank did not include a level of credit risk a cardholder posed, it only contained credit rejected or approved.

Current US Cross Reference Classification (1):
705/26

Current US Cross Reference Classification (2):
705/27

Other Reference Publication (45):
Trommer, D., ECS Catalog Merges EDI/Net Platforms: Enables Online Ordering in EDI Format Over Net, EBN, (May 20, 1996) p. 54.

First Hit   Fwd Refs

☐ Generate Collection   Print

L4: Entry 1 of 2   File: USPT   '   Dec 25, 2001

US-PAT-NO: 6334115
DOCUMENT-IDENTIFIER: US 6334115 B1

TITLE: Component electronic catalog

DATE-ISSUED: December 25, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kuribayashi; Takeshi	Yamanashi			JP
Maenishi; Yasuhiro	Kofu			JP
Nishida; Hiroyoshi	Yamanashi			JP
Nakamura; Nobuyuki	Kofu			JP
Masuda; Satoshi	Yamanashi			JP
Tanaka; Atsushi	Takatsuki			JP

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Matsushita Electric Industrial Co., Ltd.	Osaka			JP	03

APPL-NO: 09/ 117273   [PALM]
DATE FILED: July 23, 1998

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	8-012132	January 26, 1996

PCT-DATA:

APPL-NO	DATE-FILED	PUB-NO	PUB-DATE	371-DATE	102(E)-DATE
PCT/JP97/00140	January 23, 1997	WO97/27554	Jul 31, 1997	Jul 23, 1998	Jul 23, 1998

INT-CL: [07] G06 F 17/60, G06 F 7/00

US-CL-ISSUED: 705/27; 700/98, 700/117, 700/118, 700/214
US-CL-CURRENT: 705/27, 700/117, 700/118, 700/214, 700/98

FIELD-OF-SEARCH: 705/27, 364/468.04, 364/468.24, 364/468.25, 364/468.26, 364/478.02, 700/98, 700/117, 700/118, 700/119, 700/214

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected   Search ALL   Clear

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐ 5142662	August 1992	Gump et al.	707/501
☐ 5165015	November 1992	Coggins	345/356
☐ 5272641	December 1993	Ford et al.	700/97
☐ 5293479	March 1994	Quintero et al.	345/353
☐ 5694546	December 1997	Reisman	705/26
☐ 5721832	February 1998	Westrope et al.	705/27
☐ 5777876	July 1998	Beauchesne	700/95
☐ 5897639	April 1999	Greef et al.	707/103
☐ 5907489	May 1999	Elliott	700/97
☐ 6002650	December 1999	Kuribayashi et al.	700/117

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
3911465 A1	October 1990	DE	
62-247466A	October 1987	JP	
5-225292	September 1993	JP	
6-41805	February 1994	JP	
09-018199 A	January 1997	JP	

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Electronic Engineers Master Catalog and Purchasing Guide of the Electronic Industry: EEM, 1964-65, Hewlett-Packard, date unknown, presumably 1964.*
Karr, Carolyn, Advanced Imaging, vol. 10, No. 11, p. 77, "Industrial multimedia at Mazda Australia: imaging & graphics for parts ordering," Nov. 1995.*
Computer Associates International Inc., product information release, Jan. 1981.*
Varian, news release, "Varian Optical Spectroscopy Catalogs On-Line", Sep. 12, 1996.*
CD Computing News, vol. 5, No. 4, p. N/A, "Reference Technology Introduces Parts Book Application Package", Apr. 1991.*
Printed Circuit Design, "EDIF Technical Centre," XP 000672813, vol. 12, No. 10, Oct. 1995, US, pp1 17-19.
Finding, Not Searching Multimedia Database for Electronic Components: the CD Catalogue Celebrates Its Debut, Joachim Kroll, vol. 43, No. 20, Oct. 4, 1994, pp. 92-94,98.
Proceedsing of the Design Automation Conference, Las Vegas, Jun. 25, 1989-Jun. 29, 1989, Institute of Electrical and Electronics Engineers, pp. 460-465.

ART-UNIT: 274

PRIMARY-EXAMINER: Millin; Vincent

ASSISTANT-EXAMINER: Rosen; Nicholas David

ATTY-AGENT-FIRM: Wenderoth, Lind & Ponack, L.L.P.

ABSTRACT:

Image data of various kinds of components and component text data required for mounting of components, e.g., shapes, dimensions, packing forms, colors, and the like of the components are stored in a storage medium in a manner to be read out as part of a component electrical catalog. The storage medium is used to make a search for components on a screen and automatically read out necessary component text data. The component electronic catalog can be used not only to search for components on a screen, similar to a conventional component electronic catalog, but to automatically read out component text data so as to automatically form mounting data for components to be mounted which are selected through the screen search.

10 Claims, 35 Drawing figures

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L4: Entry 2 of 2   File: USPT   Dec 2, 1997

US-PAT-NO: 5694551
DOCUMENT-IDENTIFIER: US 5694551 A

TITLE: Computer integration network for channeling customer orders through a
centralized computer to various suppliers

DATE-ISSUED: December 2, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Doyle; John D.	Libertyville	IL		
Hoholik; Anthony P.	Gurnee	IL		
Groth; Dennis P.	Grayslake	IL		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Moore Business Forms, Inc.	Grand Island	NY			02

APPL-NO: 08/ 427495   [PALM]
DATE FILED: April 24, 1995

PARENT-CASE:
This is a continuation of application Ser. No. 08/063,755, filed May 20, 1993, now
abandoned.

INT-CL: [06] G06 F 151/00

US-CL-ISSUED: 395/226; 395/234
US-CL-CURRENT: 705/26; 705/34

FIELD-OF-SEARCH: 364/401, 364/402, 364/403, 364/408, 395/201, 395/208, 395/210,
395/226, 395/207, 395/228, 395/230, 395/235, 395/234

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | | Search ALL | | Clear |

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4621325	November 1986	Naftzger et al.	
☐	4658987	April 1987	Fink, Jr.	

☐	4694397	September 1987	Grant et al.	
☐	4713761	December 1987	Sharpe et al.	
☐	4958280	September 1990	Pauley et al.	364/401R
☐	4972318	November 1990	Brown et al.	364/401R
☐	4975841	December 1990	Kehnemuyi et al.	364/401
☐	4984155	January 1991	Geier et al.	364/401
☐	4992940	February 1991	Dworkin	
☐	5117353	May 1992	Stipanovich et al.	
☐	5117354	May 1992	Long et al.	
☐	5168444	December 1992	Cukor et al.	364/401
☐	5204821	April 1993	Inui et al.	364/403
☐	5224034	June 1993	Katz et al.	364/401
☐	5231566	July 1993	Blutinger et al.	364/401
☐	5319542	June 1994	King, Jr. et al.	364/401

ART-UNIT: 241

PRIMARY-EXAMINER: Weinhardt; Robert A.

ATTY-AGENT-FIRM: Nixon & Vanderhye P.C.

ABSTRACT:

An electronic requisitioning system for channeling customer requisition orders to internal suppliers and outside vendors, and processing invoices using a centralized computer system. A customer accesses an electronic item catalog and requisition form to place an order transmitted to the central computer system. Requisitions are segregated by supplier and sent as purchase orders to appropriate internal suppliers and outside vendors that ship the items directly to the customer. Invoices are centrally processed and the customer receives a combined invoice for all items requisitions and may transmit payment back through to the central computer system.

9 Claims, 31 Drawing figures

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L4: Entry 1 of 2   File: USPT   Dec 25, 2001

DOCUMENT-IDENTIFIER: US 6334115 B1
TITLE: Component electronic catalog

Abstract Text (1):
Image data of various kinds of components and component text data required for
mounting of components, e.g., shapes, dimensions, packing forms, colors, and the
like of the components are stored in a storage medium in a manner to be read out as
part of a component electrical catalog. The storage medium is used to make a search
for components on a screen and automatically read out necessary component text
data. The component electronic catalog can be used not only to search for
components on a screen, similar to a conventional component electronic catalog, but
to automatically read out component text data so as to automatically form mounting
data for components to be mounted which are selected through the screen search.

Application Filing Date (1):
19980723

Brief Summary Text (9):
Component catalog brochures have been used heretofore to form the above-described
mounting data or inspection data so as to select electronic components of various
kinds in conformity with the need from the viewpoint of the circuit design and to
mount the selected electronic components properly. Detailed and complicated
component information are edited and recorded for every kind of electronic
component in the brochures according to a predetermined classification method. In
some cases, electronic components have been actually measured with the use of
calipers or the like to obtain necessary data.

Drawing Description Text (24):
FIGS. 22A and 22B show diagrams of a different control system adapted to form
mounting data from a component electronic catalog similar to that of the first
embodiment, according to a second embodiment of the present invention and a data
processor thereof;

Detailed Description Text (6):
The data processor 8 equipped with a display 9 forms an operation control program,
as control data to be used at the control system 7, to control actual feeding of
components and to mount the to supplied components to predetermined positions, with
reference to an NC program as mounting position data for every component to be
mounted, a supply library related to supplied states of components, e.g.,
arrangement of components at a component feed section, and a component library for
correctly and surely recognizing and mounting the supplied components to
predetermined positions, etc. Mounting data C is formed based on requirements from
the functional level of the mounting apparatus 4 or supplied states of components,
etc., in other words, corresponding to the nature of the mounting apparatus 4.
Specific contents of the mounting data can be set freely.

Detailed Description Text (9):
The mounting position data A can be formed, e.g., by a device for CAD 11 and input
to the data processor 3 every time each piece of mounting position data is formed,

or total pieces of mounting position data may be stored once and transferred to the data processor 3. Alternatively, a storage medium storing the mounting position data A may be loaded to the data processor 3 for its utilization. The storage medium 12 providing the component text data B stores therein, as shown in FIG. 8, the image data IM of various kinds of components including components to be mounted and the component text data B of necessary information for mounting of components, e.g., shapes, dimensions, packing forms, colors and the like of components. Both data are stored in the storage medium 12 after being edited in accordance with a predetermined classification method. Therefore, by using both the image data IM and the component text data B, various kinds of data on the electronic components can be displayed on the screen according to predetermined procedures and search operations, to be utilized as a component electronic catalog, similar to the conventional art. An interface for this purpose may be provided at either side of the storage medium 12 and the data processor 3. It is also possible to make a required screen display of various kinds of electronic components only by the image data IM.

Detailed Description Text (13):
Needless to say, the mounting data C should be formed correspondingly depending on the type or control level of the mounting apparatus 4. If the mounting data C is formed with characteristic data of the mounting apparatus 4 taken into consideration, the mounting data C obtained fits the characteristics of the mounting apparatus 4, in other words, the mounting time is rendered shortest and handling of components becomes easy and ready without failures, with the effect of more proper mounting. The mounting data C may be arranged to include inspection data for correct mounting of components. The inspection data to detect whether components held by nozzles or chucks are directed properly, and, exchange improper components to proper ones, or correct a component improperly directed is generated by the component text data b formed for every component. Therefore, the inspection data suitable for the components to be mounted can be obtained automatically. The components can be inspected more properly with the same amount of labor and time and consequently, accurate component mounting can be assured.

Detailed Description Text (130):
The component electronic catalog of the present invention is used as a storage medium so as to select various components to be mounted through the screen search, similar to the conventional art. In addition, the electronic catalog is used to automatically read out component text data necessary for mounting of the selected to-be-mounted components, so that the NC program related to the mounting position of components, the component library related to the recognition of components, e.g., shapes, dimensions, colors or the like of components, or the supply library related to the supplied states of components such as the arrangement of components at a component feed section or the like, i.e., mounting data for feeding the components to the mounting apparatus and mounting the components at a predetermined mounting position by the mounting apparatus can be automatically formed in the conventional automatic data processing manner. Since it is not necessary to manually input data of various components necessary for forming the mounting data for every component to be mounted, the electronic catalog greatly can reduce the labor and time required in the formation of the mounting data.

Current US Original Classification (1):
705/27

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L4: Entry 2 of 2   File: USPT   Dec 2, 1997

DOCUMENT-IDENTIFIER: US 5694551 A
TITLE: Computer integration network for channeling customer orders through a
centralized computer to various suppliers

Application Filing Date (1):
19950424

Detailed Description Text (5):
FIG. 3 is a high-level block-diagram of the data processing flow in the system. On
the mainframe computer 100 at the central supplier, the transaction program 1000
(FIG. 4) is executed to centrally process the data in the system and maintain 208
databases 102'. These central databases may include individual databases on the
customer 122, e.g. ship-to information, pending requisitions 124, master product
item catalog 126, general reference information 128 such as product class codes and
product groups, and invoicing 130. Similar databases 105' can be maintained in each
customer computer system 104 if the customer system is compatible with the central
mainframe computer 100. Customer databases 105' contain information inputted at the
customer workstations 108 and information periodically exchanged between the
customer computer system 104 and the central supplier computer system 100.

Detailed Description Text (9):
FIG. 4 is a flowchart showing on a high level the process flow through the
transaction program 1000. In step 1002, a customer retrieves and inputs data into
the customer database 105' in the customer computer system 104. In step 1004, the
customer selects information from its database and inputs information into the
database, such as new requisition data 134. Periodically, such as once a day, new
information added to the customer database, such as new requisitions data files, is
transmitted to the main computer system 100 in step 1006. This information is used
to update the databases 102' in the main system and, in particular, the requisition
database 124.

Detailed Description Text (20):
The new completed requisition information in the customer database is transmitted
to the main system computer 100 during periodic batch processing in step 1204.
Similarly, update information, e.g., purchase order acknowledgments, ship-to
updates and product item updates, from the main computer is transmitted to the
customer computer to update the customer database in step 1206.

Detailed Description Text (23):
Similarly, update information on the customer catalog (SEQ CUS UPDATES) 1222 is
processed 1224 to update file items 1226 in the catalog database 136. Since the
master catalog database 126 on the main computer correlates each catalog item entry
by customer and price, the individual customer catalogs are readily updated. In
addition, data files on a particular customer, such as to whom at the customer
items are to be sold, billed, shipped and directed to the attention of, 1228, are
updated at the main computer system 100 and then transmitted to the customer
computer to update, step 1230, similar database files 1232 in the customer
databases. The data in the catalog and customer update files are also documented in

control reports. The initial customer specific information is entered when the customer is initially set up to interact with the main computer requisition system.

Detailed Description Text (25):
In step 1312, the data files loaded in the databases 102, is edited such that the customer number is converted, see data files 1314, to appropriate bill-to, ship-to, sold-to and attention-to data and then verified to ensure that the data is consistent with stored data and that the item numbers ordered conform to the item numbers in the master catalog 126. In step 1316, the requisition detail data on ordered items is split into data for the appropriate outside vendor, see data field 1318, and data for the appropriate internal departments, see data field 1320. The data fields for the internal departments is again reformatted in step 1322 for reloading back into the databases 102 of the main computer system. Generally, each internal department will maintain its own databases, separate from those of the main computer system, in a fashion similar to outside vendors.

Detailed Description Text (30):
In step 1430, the edited invoice data is again reformatted and annotated with requisition data 130, e.g., from requisition header and detail files (RQN HDR and RQN DTL), to conform to the master database 102 format and is then stored in the master database invoice file and master customer file (VLD CM) 131. (MAST INV) 130 and validated.

Current US Original Classification (1):
705/26

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ISO TC184/SC4/WG2 N 376

Supersedes ISO TC 184/SC4/WG 2 N 342

ISO 7/24/01
DWG
Date: 1997-06-05

ISO/IS 13584-42

4/3/03

Parts library: Description methodology: Methodology for structuring parts families

ABSTRACT:

This part of ISO 13584 specifies:
– the rule to group parts into generic families of parts and simple families of parts;
– the rules for the choice of the appropriate properties that shall be associated with the families of parts;
– the attributes that shall be provided by library data suppliers to describe the families and properties of parts.
– the specifications of those attributes in the EXPRESS information model that provide for the exchange of such dictionary data.

KEYWORDS: parts library, data dictionary, meta-data, Basic Semantic Unit (BSU)

COMMENTS TO READER:

This document has been reviewed and noted by the ISO TC 184/SC4 Secretariat and has been determined to be ready for this ballot cycle.

The only differences with N 332 is that the normative reference to ISO 13584-1 has been removed, the index has been completed, and the error in the cardinality of item_class has been corrected.

This document has been developed as a joint effort of ISO TC184/SC4/WG2 and IEC SC3D. The EXPRESS information model for dictionary data documented in an informative annex of this document is identical to the model documented in IEC 61360-2.

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Contents

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The utility business model and the future of computing services

M.A. Rappa

The idea of utility computing has received attention recently and for good reason. The use of computers continues to be a rapidly expanding feature of modern society, and industry has come to rely on computers to perform a multitude of tasks beyond simple data processing and storage. Computer networks have extended the reach of computing to connect businesses across the supply chain and, in many instances, directly to the consumer. With the growth of the Internet, the computer has come to play an even greater role in commerce.

Computing has also become a larger and more intimate part of daily life for many people. Individuals now use computers to accomplish a wide array of tasks, from the complex to the mundane. (1-3) Whether it is used for communicating by e-mail and instant messaging, paying bills and managing personal finances, or the pursuit of hobbies and entertainment, the computer has become an essential tool. Indeed, the variety of tasks performed with computers today would have been difficult to foresee as little as two decades ago.

With all this progress has come a greater degree of reliance on computers and their connectivity to networks, and this reliance has bred high expectations for the availability and performance of computing and networking services. This expectation is not unlike that seen in other areas of technology to which modern society has grown accustomed; for example, the dependence on a ready availability of affordably priced electricity. Long ago a curiosity and a luxury, over the last century we have seen electricity grow beyond a modern everyday convenience to become a necessity in the lives of most people.

The prominence of computers in society and our growing reliance on them raises an interesting question: Is computing the next utility? The answer to this question has broad implications for the future of computing. Already, the idea of utility computing has begun to influence the development of computer technology in such areas as the auto-provisioning of computing resources and resource sharing across a computing grid. (4-6) Its potential role in the evolution of business models for computing services is of equal importance, and that role is addressed in this paper.

Common characteristics of utilities

In many parts of the world, although by no means everywhere, services such as water, power, heat, light, common carrier transportation (airlines, buses, and railroads), and telephone access are typically provided by a public utility. What makes any particular service a utility is shaped by a combination of requirements (see Table 1), most notably: users consider it a necessity; high reliability of service is critical; ease of use is a significant factor; the full utilization of capacity is limited; services are scalable (leading to economics of scale); and exclusive rights are granted for providing service in a given area.

Necessity. Users depend on utility services to fulfill their day-to-day needs. Doing without service is an unwelcome option for them. Of course, seldom do utility services start out as essential. Its takes time for distribution networks to spread and costs to decline. It also may take time for users to adapt to the service. Once a service does take hold, it may grow in importance as users discover new ways to use it to their benefit. How crucial a service becomes may ultimately depend on the circumstances of the individual user. But once users do come to depend on a service, it can become a transparent part of their everyday reality.

Reliability. The service provided by a utility must be readily available when and where the user needs it. A temporary of intermittent loss of service may cause more than a trivial inconvenience to the user; a prolonged loss of service may cause severe hardship. Because a failure in service has undesirable consequences, utilities must operate with an exceptionally high degree of reliability.

Providing continuous service in the face of various contingencies is a huge technological challenge that utilities face. Because some kinds of services may not be easily or cheaply inventoried, if at all, redundancy must be built into production capacity to make up for the inevitable equipment failure. Furthermore, because utilities provide on demand services, they must deploy transparent failover

mechanisms and standby services to ensure continuous availability to the user. If one area of a service grid fails, the system must be able to compensate and respond instantaneously to the shortfall, thereby preventing the disruption of the service.

Necessity drives user expectations of utility services beyond what may be typical in other industries. Whether or not these expectations are realistic, utilities must do their best to buffer users from the predictable problems that could cause a discontinuity in service.

Usability. No matter how technologically complex they may be on the production end, utility services are characteristically simple at the point of use. Users have what could be called a "plug-and-play" mentality. This is not to say that devices connected to a service are unsophisticated, but the utility service itself tends to exist only in the background. Users may become mindful of a utility only in those rare instances when the service fails to meet their expectations. This may explain why the public perception of a utility is not always positive.

One ingredient in making a service simple at the user interface is a high level of technical standardization. Devices that add user functionality to the service must conform to the specifications of the network. Plug compatibility, independent of the vendor, is a common feature of utility services. Even so, technical standardization can be extremely difficult to achieve. In marketplaces where proprietary innovation is strong, the incentive for competitors to agree on standards is weak. Although a lack of standardization is costly and inconvenient, premature consensus on a standard may forestall significant innovation that can be of benefit to users.

To the extent that incompatible standards take hold, in some cases the consequences can endure for long periods, as fixed investments in infrastructure grow. Just how long this condition can last is illustrated by the case of the difference in voltage standards around the world. In such situations, technologies that enable the conversion between standards become a regular and cumbersome aspect of the user experience.

Utilization rates. Utilities are driven by a need to carefully manage utilization rates. User demand for utility services can fluctuate widely over time and across the service region. Because sufficient production capacity must be installed to handle periods of peak demand, overall utilization rates are typically well below full capacity.

In addition to fluctuations in usage, there may be discrete incidents of an exceptional nature when demand spikes sharply upward. Such spikes can occur when large numbers of users suddenly want to use the service simultaneously. Other spikes may occur when users fear a shortage in supply and begin hoarding, to the extent that it is possible.

Underutilization in off-peak periods provides a strong economic rationale for service providers to shift user demand from peak to off-peak periods. By pricing services according to actual metered usage and by providing off-peak price discounts, fluctuations in user demand can be smoothed out over the cycle. How a service is billed may also create incentives for users to limit their usage.

Scalability. Utilities are commodity businesses. Therefore, utility services can exhibit significant economies of scale that favor larger producers over smaller ones. As production capacity rises, the unit cost of production falls. There may be other size-related benefits as well. It might be expected that as the demand for a service increases beyond some threshold, the quality of service may decline as users begin to compete with each other. However, with some types of utilities, service can become more and more useful as the number of users of increases.

Service exclusivity. The economies of scale in a utility can benefit from a monopolistic provision of services. When this is the case, the government may step in to grant an exclusive franchise in a geographic region. Government regulation of the service and how it is priced typically accompanies such a sanction. Cost-based pricing is a common formula. With the benefits of an exclusive franchise comes the obligation to serve any and all users regardless of how profitable it may be for the utility.

Some of the common characteristics of a utility derive from its relationship with its customers. Other characteristics are derived from technological and business aspects of how the service is produced and distributed. The preceding list of characteristics, while important, is not meant to exclude other possible factors that may be relevant to particular types of utility.

Each of the characteristics described here mayor may not play an equal role in shaping any particular type of utility service. Table 1 provides an evaluation in the most general terms of the potential relevance of each factor for public utility services, including water,

electricity, and common carrier (or public) transportation. In addition, the comparison is extended to examine a few businesses that have some characteristics in common with public utilities, namely radio and television broadcasting and Internet access services.

The utility business model

The factors of user necessity, reliability, usability, utilization, scalability, and exclusivity, when taken together, shape the business model for utility services. To understand the nature of the utility model, it is useful to place it in the context of business models in general. A business model is a method of doing business. All business models specify what a company does to create value, how it is situated among upstream and downstream partners in the value chain, and the type of arrangement it has with its customers to generate revenue. In any given industry, the methods of doing business may vary, but there are limits imposed by technological factors, by the competitive dynamic among companies and between companies and their channel partners, and by customer expectations and preferences, among other things.

There have been a number of attempts to create schema for classifying the various types of business models seen in practice, particularly in relation to the internet. (7-11) The commercialization of the Internet during the 1990s drew a great deal of attention to business models. The Internet opened the door to new business opportunities, but many Internet-based enterprises failed because they had not clearly thought through their model--particularly, how money would be made. Nonetheless, given the rapid adoption of the Internet, it may no longer be possible to discuss business models without taking it fully into account.

One approach to the classification of e-business models is a comprehensive taxonomy using the customer relationship as the primary dimension for defining categories. (7) Although by no means the only approach, this has proven to be a useful framework because it builds upon a common parlance already used in many industries to describe methods of business. Although other approaches may be more suitable for other purposes, it is unreasonable to expect that any single taxonomy can account for the vast diversity of business models found in practice without becoming unwieldy.

Nine major categories are used to classify a number of different types of business models that have been identified in practice among Web-based enterprises (see Table 2):

Brokerage model. Brokers are market makers: they bring buyers and sellers together and facilitate transactions. Brokers playa frequent role in business-to-business (B2B), business-to-consumer (B2C), or consumer-to-consumer (C2C) markets. Usually, a broker charges a fee or commission for each transaction it enables. The formula for fees can vary. Brokerage models include exchanges, demand collection systems, and auction brokerages.

Advertising model. The advertising model on the Web is an extension of the traditional media broadcast model. The broadcaster, in this case a Web site, provides content (usually, but not necessarily, for free) and services (like e-mail, chat, forums) mixed with advertising messages in the form of banner ads. The banner ads may be the major or sole source of revenue for the broadcaster. The broadcaster may be a content creator or a distributor of content created elsewhere. The advertising model works best when the volume of traffic is large or highly specialized. Advertising models include portals, query-based paid placement, contextual advertising, and content-targeted advertising.

Information-intermediary model. Data about consumers and their consumption habits are valuable, especially when that information is carefully analyzed and used to target marketing campaigns. Independently collected data about producers and their products are useful to consumers who are considering a purchase. Some firms function as "infomediaries" (information intermediaries) assisting buyers and/or sellers to understand a given market.

Merchant model. Merchants are wholesalers and retailers of goods and services. Sales may be made based on list prices of through auctioning. Merchant models include virtual merchants or "e-tailers", mail-order businesses with a Web-based catalog, and traditional brick-and-mortar retail establishments with Web storefronts.

Manufacturer Direct model. The maker of a product or service may sell (by purchase, lease, or license) directly to the consumer. The manufacturer or direct model is based on the power of the Web to allow a manufacturer to reach buyers directly and thereby compress the distribution channel. The manufacturer model may be chosen for its efficiency, improved customer service, or due to a better

understanding of customer preferences.

Affiliate model. The affiliate model provides purchase opportunities wherever people may be surfing the Web. Financial incentives (in the form of a percentage of revenue) are offered to affiliated partner sites. The affiliates provide purchase-point click-through (i.e. direct linking) from their Web sites to the merchant's Web site. It is a pay-for-performance model--if an affiliate does not generate sales, no cost to the merchant is incurred. The affiliate model is inherently well suited to the Web, which explains its popularity. Variations of this model include banner exchange, pay-per-click, and revenue sharing programs.

Community model. The community model is based on user loyalty. Loyal users invest both their time and emotions in a business. Revenue can be generated based on the sale of ancillary products and services or voluntary contributions. The best known example of a community model is that of "open source" computing. The businesses that have emerged around open source products rely on revenue generated from related services such as systems integration, product support, tutorials, and user documentation. Another example is the traditional public broadcasting model, the listener or viewer-contributor method used in not-for-profit radio and television broadcasting. The model is based on the creation of a community of interested users who support the site through voluntary donations.

Subscription model. Users are charged a periodic daily, monthly, or annual fee to subscribe to a service. It is not uncommon for sites to combine free content with "premium" (i.e., subscriber only or member only) content. Subscription fees are incurred regardless of actual usage rates. Subscription and advertising models are frequently combined. Examples include content services, person-to-person networking services, trust services, and Internet service providers (ISPs).

Utility and hybrid models. The utility model is based on metering usage and constitutes a "pay as you go" approach. Unlike subscription services, metered services are based on actual usage rates. For example, an ISP may use a utility model, charging customers for connection minutes, though the subscription model is more common among ISPs operating in the United States. An interesting hybrid model on the Web, the metered subscription, allows subscribers to purchase access to content in metered portions, such as the number of pages viewed.

Metering customer usage is one characteristic that figures prominently in the utility business model and sets it apart from other models. But utilities in the off-line world are not limited to the approach of metering usage (see Table 3 and Figure 1). One example is residential telephone services. For some time, the so-called "plain old telephone system" (or POTS) adopted a combination of metered usage for long distance services, a subscription model for local calling services, and a lease model for the usage of telephone equipment (though nowadays equipment is typically purchased outright). Under a subscription model, users pay a flat rate for monthly service regardless of actual usage levels.

[FIGURE 1 OMITTED]

Cellular phone services have adopted yet another combination of the subscription and utility models. A monthly subscriber fee for both local and long distance service is tied to a maximum level of usage (i.e., connection minutes), beyond which usage is metered and billed accordingly. The subscription may come with a minimum-length service contract, and may also include equipment as part of the agreement. The popularity of the cellular business model has recently led telephone service providers to consider the adoption of a similar approach with the introduction of a flat-rate subscription for both local and long distance calling services bundled together.

Radio and television broadcasting offers another example of how different business models can be combined in a service that exhibits characteristics similar to a utility. Terrestrial broadcasting services have typically depended on sponsorship in the form of commercial advertisements that are interspersed with programming. There is also a form of terrestrial broadcasting, which is publicly sponsored, that could be classified with community business models. Satellite and cable broadcasters use a subscription model in which the user is charged for a basic package of bundled services and can also choose from a menu of premium content.

Internet access services provide an example of how business models adapt to technological changes in how a service is provided. Early in the commercial rollout of the Internet, services offered dial-up access by using a combination of business models not unlike the telephone service on which that access depended. A user could pay according to actual usage or pay a subscriber fee for limited (and later unlimited) service. With the advent of residential broadband services, Internet access providers offer "always on" service using a subscription model.

Utility computing

Recent projections from IBM have envisioned utility computing as an integral part of the future of information technology. IBM Global Services provides the following definition:

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Utility computing is the on demand delivery of infrastructure,
applications, and business processes
in a security-rich, shared, scaleable, and standards-based
computer environment over the Internet for
a fee. Customers will tap into IT resources-and
pay for them-as easily as they now get their electricity
or water. (12)
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In a recent interview, Irving Wladawsky-Berger, General Manager for e-business on demand, said:

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The idea of accessing computing and data without
having to own the computers probably is even
older than the 1980s because at some level that's
what time-sharing computing was about, and that
probably was back in the 1970s. It's a very nice
thought, which comes from watching other successful
utilities. You know, people are used to the
fact that they use electricity, they turn on water
faucets, they use the telephone, they get access to
television, and in none of these cases do they have
to own the equipment that generates electricity.
They don't have to own the water supply, of the
telephone switches, of the broadcasting companies.
Everybody says, "Gee wouldn't it be nice if
I can similarly plug in to get access to applications
and information?" (13)
```

Recent discussions of computing have begun to point to its similarity to conventional public service utilities. (14,15) To be sure, the analogy can be taken too far, but it is instructive to examine the general service requirements of utilities in the context of computing to better gauge where business models may be heading in the future. It may very well be that current business models based on purchasing, leasing, and licensing of products will ultimately give way to a utility model of computing based on subscriber fees and metered services.

The importance of computers for business has become an indisputable fact. Computer and network services are an end-to-end component of many business processes. To be without service is not merely an inconvenience; it is a potential financial disaster. It should therefore come as no surprise that businesses both large and small have come to view computers as a necessity in the same manner as they might view utility services. Furthermore, it is likely that the reliance of individual users on computing services will soon rival if not surpass their reliance on public utilities like the residential telephone as an essential service.

As reliance on computing grows, so will the expectation among users for reliable service. Improvements in computer reliability have been made, but there is still much work to be done. Software remains a source of instability in the heterogeneous computer environments that exist today. As software has become more powerful, it has also become more complex in terms of the underlying code. This complexity creates a major challenge in engineering reliable software even under benign conditions, and this is exacerbated by the unrelenting security threat to computer networks. Current approaches to security, which can rely heavily on patching software after it is deployed, may be severely flawed as a method for achieving high reliability.

The growth of personal computers and the Internet have made computing a mainstream activity. Today the computer user population

cuts across a wide spectrum in terms of age, education, and other demographic dimensions. Fortunately enormous progress has been made to improve computer usability. The user interface for personal computing is good evidence of success in making computers easier to use. Both hardware and software makers are moving quickly in the direction of creating products with "plug and play" convenience. But even so, computers have not yet achieved the goal of becoming as simple to use as a common household appliance. Advances in usability have been offset by the rapid technological innovation that has kept designs and standards in flux.

The substantial investment made in computing infrastructure has spurred an interest in increasing the overall rate of its utilization. Current progress in technology is making this possible. An example is the virtualization of server and storage capacity and the advent of grid computing supported by open standards. Grid computing will ultimately present utility-computing service providers with capacity planning issues similar to those faced by public utilities. Managing peak demand and the economical utilization of capacity will require incentives to modify usage patterns. This will favor the adoption of metered usage as a core element in the business model for utility computing.

To the extent that technology enables computing services to be scalable, the economies of scale typical of public utility services should also apply to utility computing. The benefits may come on several fronts, because the fixed cost of services of the utility can be amortized across a larger population of users, thereby reducing the unit cost per user. Utility computing may also benefit from the ability to retain the necessary skilled workforce to manage and maintain computing services in a way that is difficult for small and medium-sized enterprises. This may be of particular importance in dealing with network security, a field where there is a scarcity of talent.

One manner in which utility computing may differ from a public utility is with respect to service exclusivity. The trend in recent decades has been to deregulate and encourage competition in the public utility sector, for example, telephone and electricity service. It may be too soon to judge the overall effect deregulation has had on the provision of public services. At least some of the challenge of deregulation is the result of the tumultuous transition from a regulated environment. Utility computing may benefit from an opportunity to grow in a highly competitive marketplace. To the extent that technology evolves in a direction that permits competition in the provision of services, such as with open network protocols, the need for service exclusivity may be lessened. However, it should be expected that de facto technical standards and competitive advantages among enterprises might eventually lead to the emergence of dominant (if not exclusive) utility computing service providers.

It is interesting to speculate on what shape the utility-computing business model might take in the foreseeable future. The provision of computing services presents a matrix of opportunities that goes well beyond any comparison to traditional public utilities like electricity. Although it may be technically feasible to meter some kinds of computing services, there remains the question of which services to meter and how this can be done. At the level of computing infrastructure, it is possible to envision the metered usage of CPU resources, for example. At the application layer, there is already a move away from a pure license model toward subscription-based services. It is also conceivable that some kinds of applications could be adapted to a metered usage model, or a combination of subscription and metering. Lastly, it may be advantageous to meter computing services based on the completion rate of discrete business processes, such as the number of customer transactions.

>From the customer's point of view, the business logic of metering usage can be compelling: one pays only for what one uses. This is something that IT managers who are faced with an escalating cost-of-ownership can appreciate. But the initial move away from the ownership model to the utility computing model will be hampered unless there exist clear operational measures of the underlying demand function and, therefore, a way to determine the cost to an organization when the meter is turned on. Depending on the kind of metering employed, end users may have to adjust their computing habits to cultivate an ethic of resource conservation and be mindful of the usage costs they incur. It is likely that commoditized services will be more easily adapted to a metered usage model.

In comparison, the subscription model provides users with more flexibility, and provides managers with a more accountable, if intermediate, approach on the path toward utility computing. A subscription-based service is more amenable to high value-added proprietary services that require more elaborate service level agreements. In a situation where there remains uncertainty about the upside demand for services or where there are weak controls on usage levels, we are more likely to see adoption of a subscription approach. Table 4 provides a summary comparing the factors that may favor deployment of a subscription model versus those that favor metered usage of computing services.

Conclusion

A vision of the future of computing services based on the utility-computing business model has already begun to take shape. Application service providers, managed services, and hosting are an increasingly common part of the computing landscape. Users have come to depend on computers and have high expectations of their reliability; they look toward a day when the use of computers matches the ease of other everyday appliances. Furthermore, the provision of computing services is increasingly driven by economies of scale and the effective utilization of resources.

The kind of utility-computing business model that will find favor with the customer remains to be seen. Already large enterprise customers are taking the first steps toward a model based on multiyear subscription contracts. However the metered use of computing services is a significant leap from the current model of purchasing or leasing computer hardware, accompanied by software licensing.

Clearly, there are trade-offs involved in migrating to new business models. Customers must be convinced of the tangible benefits in making a change. What is ceded in terms of ownership and control must be more than modestly offset by advantages in procuring computing services, such as flexibility, speed of deployment, and cost savings.

Table 1 Requirements common to utility services

	Necessity	Reliability
Water	H	H
Electricity	H	H
Common Carrier Transportation	M	H
Telephone:		
POTS	H	H
Cellular	M	M
Radio and Television Broadcasting:		
Terrestrial	M	H
Satellite	M	M
Cable	M	H
Internet Access:		
DSL	H	H
Cable	H	H
Dial-up	M	M

	Usability	Utilization
Water	H	M
Electricity	H	H
Common Carrier Transportation	H	H
Telephone:		
POTS	H	H
Cellular	H	H
Radio and Television Broadcasting:		
Terrestrial	H	L
Satellite	M	L
Cable	H	L
Internet Access:		
DSL	H	H
Cable	H	H
Dial-up	H	H

	Scalability	Exclusivity

Water	H	H
Electricity	H	H
Common Carrier Transportation	M	H
Telephone:		
POTS	H	M
Cellular	H	L
Radio and Television Broadcasting:		
Terrestrial	H	M
Satellite	H	L
Cable	H	H
Internet Access:		
DSL	H	H
Cable	H	H
Dial-up	H	L

L = Low relevance

M = Medium relevance

H = High relevance

Table 2 Taxonomy of e-business models

Type	Model
Brokerage	Marketplace Exchange--Offers a full range of services covering the transaction process, from market assessment to negotiation and fulfillment. Exchanges operate independently or are backed by an industry consortium.
	Buy/Sell Fulfillment--Takes customer orders to buy or sell a product or service, including terms like price and delivery.
	Demand Collection System--The patented "name-your-price" model pioneered by Priceline.com **. Prospective buyer makes a final (binding) bid for a specified good or service, and the broker arranges fulfillment.
	Auction Broker--Conducts auctions for sellers (individuals or merchants). Broker charges the seller a listing fee and commission based on the value of the transaction. Auctions vary widely in terms of the offering and bidding rules.
	Transaction Broker--Provides a third-party payment mechanism for buyers and sellers to settle a transaction.
	Distributor--A catalog operation that connects a large number of product manufacturers with volume and retail buyers. Broker facilitates business transactions between franchised distributors and their trading partners.
	Search Agent--A software agent used to search for the

price and availability of goods or a service
specified by the buyer or to locate hard-to-find
information.

Virtual Mall--A hosting service for on-line merchants
that charges setup, monthly listing, and/or
transaction fees. May also provide automated
transaction and relationship marketing services.

Advertising

Portal--Usually a search engine that may include
varied content or services. A high volume of user
traffic makes advertising profitable and permits
further diversification of site services. A
personalized portal allows customization of the
interface and content to the user. A niche portal
cultivates a well-defined user demographic.

Classifieds--List of items for sale or wanted for
purchase. Listing fees are common, but there also
may be a membership fee.

Registered User--Content-based sites that are free to
access but require users to register and provide
demographic data. Registration allows inter-session
tracking of user surfing habits and thereby
generates data of potential value in targeted
advertising campaigns.

Query-based Paid Placement--Sells favorable link
positioning (i.e., sponsored links) or advertising
keyed to particular search terms in a user query,
such as the Overture ** trademark
pay-for-performance model.

Contextual Advertising--Freeware developers who bundle
ads with their product. For example, a browser
extension that automates authentication and form
fill-ins may also deliver advertising links or
pop-ups as the user surfs the Web. Contextual
advertisers can sell targeted advertising based on
an individual's surfing behavior.

Content-Targeted Advertising--Pioneered by Google **,
the precision of search advertising is extended to
the rest of the Web. Google identifies the content
of a Web page and then automatically delivers
relevant ads when a user visits that page.

Ultramercials **--Interactive online ads that require
user interaction to reach the intended content.

Information
Intermediary

Advertising Networks--A service feeding banner ads to
a network of member sites, thereby enabling
advertisers to deploy large marketing campaigns. Ad
networks collect data about Web users that can be
used to analyze marketing effectiveness.

Audience Measurement Service--On-line audience market
research.

Incentive Marketing--Customer loyalty programs
providing incentives to customers such as redeemable
points or coupons for making purchases from
associated retailers. Data collected about users are

	sold for targeted advertising.
Merchant	Virtual Merchant--A retail merchant that operates solely over the Web (also known as an "e-tailer").
	Catalog Merchant--Mail-order business with a Web-based catalog which combines mail, telephone, and on-line ordering.
	Click and Mortar--Traditional brick-and-mortar retail establishment with a Web storefront.
	Bit Vendor--A merchant who deals strictly in digital products and services and, in its purest form, conducts both sales and distribution over the Web.
Manufacturer Direct	Purchase Model--A manufacturer that sells its products or services directly to the consumer.
	Lease Model--A manufacturer that finances the sale or rental of its products directly to the consumer.
	Licensing Model--A manufacturer, such as a software maker, that licenses its product directly to the consumer.
	Brand-Integrated Content--In contrast to the sponsored-content approach (i.e.. the advertising model), brand-integrated content is created by the manufacturer itself for the sole purpose of product placement.
Affiliate	Banner Exchange--Trades banner placement among a network of affiliated sites.
	Pay-per-Click--Site that pays affiliates for a user click-through.
	Revenue Sharing--Offers a percent-of-sale commission based on a user click-through in which the user subsequently purchases a product.
Community	Open Source--Software developed voluntarily by a global community of programmers who share code openly. Instead of licensing code for a fee, open source relies on revenue generated from related services like systems integration, product support, tutorials, and user documentation.
	Public Broadcasting--User contributor model used by not-for-profit radio and television broadcasting extended to the Web. The model is based on the creation of a community of users who support the site through voluntary donations.
	Knowledge Networks--Discussion sites that provide a source of information based on the sharing of expertise among professionals.
Subscription	Content Service--Provides text, audio, or video content to users who subscribe for a fee to gain access to the service.
	Person-to-Person Networking Service--Conduit for the distribution of user-submitted information, for example, individuals searching for former schoolmates.
	Trust Service--Membership association that abides by an explicit code of conduct and to which members

pay a subscription fee.

Internet Service Provider--Provides network connectivity and related services.

Utility   Metered Usage--Measures and bills users based on actual usage of a service.

Metered Subscription--Allows subscribers to purchase access to content in metered amounts (e.g., numbers of pages viewed).

Table 3 Business models of utility services

Type of Service	Business Models
Water	Metered usage of service
Electricity	Metered usage of service
Common Carrier Transportation	Basic pay-as-you-go fare for one-way or roundtrip service; subscription for commuter service
Telephone:	
POTS	Subscription for local service; metered usage of long distance service; equipment is leased or purchased
Cellular	Subscription with usage limits; metered usage in excess of the subscription limit; equipment purchased or bundled with subscription
Radio and Television Broadcasting:	
Terrestrial	Advertiser-sponsored, community-sponsored
Satellite	Subscription with basic package and premium services
	Lease or purchase equipment
Cable	Subscription with basic package and premium services
	Pay-per-view for special event programming and movie selections
	Leased equipment is bundled with service
Internet Access:	
DSL	Subscription for unlimited ("always on") service
	Leased equipment is bundled with service
Cable	Subscription for unlimited ("always on") service
	Leased equipment is bundled with service
Dial-up	Subscription for limited service or metered usage based upon connection time
	Equipment is purchased

Table 4 Factors favoring subscription versus metered utility model for

computing services

Metered Model	Subscription Model
Usage measures are easy to define, monitor, and verify	Usage measures are difficult to define, monitor, or verify
Strong managerial controls on usage patterns	Weak managerial controls on usage patterns
Commoditized, low value-added services	Proprietary, high value-added services
Favored by cost-conscious users with an ethic to conserve resources	Favored by users who are less conscious of resource costs and the need to conserve
Easy to forecast resource usage patterns	Hard to forecast resource usage patterns

Acknowledgments

** Trademark or registered trademark of priceline.com Incorporated, Google Inc., Ultramercial, Inc., or Overture Services Inc.

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DATE-ISSUED: March 12, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Montville; David	Chicago	IL	60657	
Montville; Adam	Chicago	IL	60657	

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	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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☐	5809242	September 1998	Shaw et al.	709/217
☐	5850442	December 1998	Muftic	
☐	5877759	March 1999	Bauer	345/339
☐	5961602	October 1999	Thompson et al.	709/229
☐	5974446	October 1999	Sonnenreich et al.	709/204
☐	6096096	August 2000	Murphy et al.	717/11
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Screen Print of <hushmail.com>, "hushmail", dated May 28, 1999, 7 pages (hand numbered).
Microsoft, "Planning and Deploying Outlook Web Access", copyright 1999, 23 pages, hand numbered.

ART-UNIT: 2154

PRIMARY-EXAMINER: Vu; Viet D.

ATTY-AGENT-FIRM: Chapman and Cutler

ABSTRACT:

A full-featured e-mail system is used in both Internet-based and client-side (personal computer) forms. In each form, either basic e-mail service is provided to system subscribers or a secure, premium service with authentication, concealment, integrity, and non-repudiation functions for electronic messaging services is provided. In either form and at either level of service, subscribers can work off-line on their own computers with proprietary software loaded or, alternatively, on-line on any computer with an Internet connection. The system is interoperable, to preserve security, with all S/MIME compliant software applications, even for those users not subscribing to a service implementing the disclosed system. Digital certificates can be provided as a security service of the disclosed system, rather than requiring a second source with separate verification procedures. As additional optional features, the subscriber can control compression of outgoing attachment files, rather than having that function absent or operate in some automatic way. Decompression of such file attachments when received occurs automatically for subscribers, without having to invoke a different program or system. Interactive help features, book hierarchy uniformity for messages, accounts, certificates, virus warnings, and dual naming capability are also provided and available to subscribers in both the Web-based and the client-side application forms disclosed herein, and in both basic and premium service levels.

10 Claims, 14 Drawing figures

☐ [Generate Collection] [Print]

L1: Entry 1 of 2   File: USPT   Mar 26, 2002

US-PAT-NO: 6363363
DOCUMENT-IDENTIFIER: US 6363363 B1

TITLE: System, method and article of manufacture for managing transactions in a high availability system

DATE-ISSUED: March 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Haller; Daniel R.	Menlo Park	CA		
Nguyen; Trong	Sunnyvale	CA		
Rowney; Kevin T. B.	San Francisco	CA		
Berger; David A.	San Mateo	CA		
Kramer; Glenn A.	San Francisco	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
VeriFone, Inc.	Santa Clara	CA			02

APPL-NO: 09/ 382718   [PALM]
DATE FILED: August 24, 1999

PARENT-CASE:
This application is a continuation of Ser. No. 08/664,634, filed Jun. 17, 1996, now U.S. Pat. No. 6,026,379.

INT-CL: [07] H04 L 12/00

US-CL-ISSUED: 705/40; 705/26, 705/27, 705/77, 709/203, 709/230, 709/245, 709/250, 709/249
US-CL-CURRENT: 705/40; 705/26, 705/27, 705/77, 709/203, 709/230, 709/245, 709/249, 709/250

FIELD-OF-SEARCH: 705/77, 705/80, 705/26, 705/27, 705/29, 705/34, 705/40, 709/203, 709/219, 709/227, 709/230, 709/238, 709/245, 709/250, 709/249

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

[Search Selected] [Search ALL] [Clear]

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL

☐   <u>5163098</u>   November 1992   Dahbura   380/24

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96/23284	January 1995	WO	
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Bernstein et al. Digital Equipment, "STDL-A portable language for transaction processing" pp. 218-229.*
Multimedia and Videodisc Monitor, "Verifone to introduce . . . purchasing system", Oct. 1, 1995.

ART-UNIT: 2767

PRIMARY-EXAMINER: Peeso; Thomas R.

ABSTRACT:

An architecture is disclosed allowing a server to communicate bidirectionally with a gateway over a first communication link, over which service requests are initiated by the server. In response to a transaction received from a host legacy system at the gateway, the gateway parses one or more transaction response values from the host message, maps the one or more transaction response values to a canonical response code, and stores the canonical response code in a transaction log. According to a broad aspect of a preferred embodiment of the invention, communication networks that employ transactions between applications must effectively manage transactions that flow over the network. In addition, networking systems must also detect counterfeit transactions, especially, when the networking systems are utilized for financial transactions. An active, on-line database is utilized as a transaction log to track original requests, valid retrys and detect fradulant transactions. The transaction log serves as a memory cache where the received host response is returned to a valid retry transaction should the original response fail to reach a server because of a communications problem.

24 Claims, 109 Drawing figures

<u>First Hit</u>   <u>Fwd Refs</u>
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L1: Entry 2 of 2   File: USPT   Feb 15, 2000

US-PAT-NO: <u>6026379</u>
DOCUMENT-IDENTIFIER: US 6026379 A

TITLE: System, method and article of manufacture for managing transactions in a
high availability system

DATE-ISSUED: February 15, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Haller; Daniel R.	Menlo Park	CA		
Nguyen; Trong	Sunnyvale	CA		
Rowney; Kevin T. B.	San Francisco	CA		
Berger; David A.	San Mateo	CA		
Kramer; Glenn A.	San Francisco	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
VeriFone, Inc.	Santa Clara	CA			02

APPL-NO: 08/ 664634   [PALM]
DATE FILED: June 17, 1996

INT-CL: [07] <u>H04</u> <u>N</u> <u>1</u>/<u>413</u>

US-CL-ISSUED: 705/34; 705/26, 705/27, 705/39
US-CL-CURRENT: <u>705</u>/<u>34</u>; <u>705</u>/<u>26</u>, <u>705</u>/<u>27</u>, <u>705</u>/<u>39</u>

FIELD-OF-SEARCH: 705/26, 705/27, 705/39, 705/44, 705/34

PRIOR-ART-DISCLOSED:

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ART-UNIT: 274

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ABSTRACT:

An architecture is disclosed allowing a server to communicate bidirectionally with a gateway over a first communication link, over which service requests are initiated by the server. In response to a transaction received from a host legacy system at the gateway, the gateway parses one or more transaction response values from the host message, maps the one or more transaction response values to a canonical response code, and stores the canonical response code in a transaction log. According to a broad aspect of a preferred embodiment of the invention, communication networks that employ transactions between applications must effectively manage transactions that flow over the network. In addition, networking systems must also detect counterfeit transactions, especially, when the networking systems are utilized for financial transactions. An active, on-line database is utilized as a transaction log to track original requests, valid retrys and detect fradulant transactions. The transaction log serves as a memory cache where the received host response is returned to a valid retry transaction should the original response fail to reach a server because of a communications problem.

25 Claims, 106 Drawing figures